



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,516	12/28/2005	Masahiro Goto	CU-4639 RJS	8063
26530	7590	09/26/2007	EXAMINER	
LADAS & PARRY LLP 224 SOUTH MICHIGAN AVENUE SUITE 1600 CHICAGO, IL 60604			NGUYEN, THONG Q	
			ART UNIT	PAPER NUMBER
			2872	
			MAIL DATE	DELIVERY MODE
			09/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/562,516

Applicant(s)

GOTO, MASAHIRO

Examiner

Thong Q. Nguyen

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892). | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/31/07</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The present Office action is made in response to the amendment filed on 8/31/2007. It is noted that in the amendment, applicant has made changes to the drawings, the specification and the claims. Regarding to the claims, applicant has amended claims 1-5, 8 and 13 and canceled claim 9. There is not any claim being added. The pending claims 1-8 and 10-17 are examined in this Office action.

Drawings

2. The replacement sheet contained corrected figure 15 was received by the Office on 8/31/2007 and is approved by the examiner. As a result, the application now contains fourteen sheets of figures 1-8, 9A-C, and 10-14 filed on 12/28/2005 and a replacement sheet contained figure 15 filed on 8/31/2007.

These drawings are objected by the examiner for the following reasons.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: In particular, the reference "4" stated in the specification in page 31 is not shown in at least one figure. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37

Art Unit: 2872

CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The lengthy specification which was amended by the amendment of 8/31/2007 has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

5. The objections to the specification as set forth in the previous office action are overcome by the amendments to the specification as provided in the amendment of 8/31/2007.

Claim Objections

6. The objections to the claims as set forth in the previous office action are overcome by the amendments to the claims as provided in the amendment of 8/31/2007.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1-8 and 10-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masahiro (Japanese reference No. 2003-66206 (hereafter Masahiro '626) in view of Cohen (U.S. Patent No. 4,621,898) (all of record).

Masahiro discloses an optical device. The device as described in sections [0053]-[0054] and shown in fig. 1 comprises a fresnel lens (104), a first view angle control sheet (103), a second view angle control sheet (102) and a touch sensor (101) arranged in that order from a screen of an liquid crystal display (105). From the descriptions provided in sections [0006]-[0012], [0056] and [0100], each of the view angle control sheet (103, 104) comprises the following structures: a) a first transparent base element (1), a second transparent base element (3) and a lens sheet (2) sandwiched between the first and second elements (1,3); b) the lens sheet (2) comprises lens portions having trapezoidal shapes in cross-sections and arranged at predetermined spaces from each others, and wedge-shaped portions having isosceles triangle shapes in cross-sections which wedge-shaped portions are arranged between the lens portions; c) the wedge-shaped portion has a refractive index which is smaller than the refractive index of the lens portion; d) each of the wedge-shaped portions comprises a bottom surface (7) facing the element (1) and two slopes formed an angle in the range of 5 to 15 degrees with respect to a normal line of the a light beam outgoing plane, see sections [0037], [0056], and [0074]; e) each of the wedge-shaped portions contains light absorbing (5) mixed in a resin base substrate (6) of low refractive index; f) in section [0074], the refractive indexes of the materials of the lens portion and the wedge-shaped portion is in the range of 0.23 to 0.996 which covers the range of 0.8 to 0.98, and the angle θ is in the range of 5 to 15 degrees and thus it is expected that the structure of the lens

portion and the wedge-shaped portions provided in the mentioned section [0074] satisfies the conditions as recited in the present claims 2-5. See also In re Wertheim, supra 541 F. 2d 257, 191 USPQ 90 (CCPA 1976); In re Titanium Metals Corporation of America, supra 227 USPQ 773 (Fed. Cir. 1985); g) The wedge-shaped portions can have its two slopes following a curved contour or a straight line, see sections [0030], [0076] and figs. 7; h) the use of light absorbing particles mixed inside a resin substrate in the volume and the relationship between the dimension of the particle and the width of the bottom surface of each wedge-shaped portion as described in sections [0014]-[0016] and [0095] satisfy the condition governing the relationship between the two as recited in present claims 11-12 and the crosswise stripe as recited in present claim 15; i) the use of antireflection coating, antistatic coating, ...is disclosed in sections [0044], [0053] and [0066]; and j) the arrangement of two control sheets in a mutually perpendicular arrangement is disclosed in section [0006] and fig. 1. Regarding to the feature that the width of the bottom surface is not more than 1/1.5 of a size of a pixel as recited in present claim 17, such a feature is within the level of one skilled in the art to control the size/dimension of the bottom surface of the wedge-shaped portion with respect to the size of a pixel in a display device for the purpose of providing an optimum result in quality of the image display.

Regarding to the feature that one of the angle formed by a slope with a normal line is larger than the angle formed by the other slope with the normal line as

recited in present claim 7, such a feature is not critical to the invention because applicant has admitted that the slopes of the wedge-shaped portion are oriented in a similar fashion. Such a use of a wedge-shaped portion in the form of an isosceles configuration, i.e., the angles formed by the slopes with the normal line are equal, is indeed claimed as can be seen in present claim 6. Further, it is within the level of one skilled in the art to select individual slope angles based on the incident light to control the direction of light output from the wedge-shaped portion to a viewer.

The only feature missing from the light control sheet provided by Masahiro is that he does not explicitly disclose that the leading edge of the wedge-shaped portion faces to a viewer side with an outside light beam absorption effect and the bottom surface of the wedge-shaped portion faces the image side as claimed. In the system as provided by Masahiro '206, the leading edge of the wedge-shaped portion faces the image side and the bottom surface of the wedge-shaped portion faces the viewer side. See fig. 1, for example.

However, it was decided in the Courts that a rearrangement or a reversal of the components in an optical device involves only routine skill in the art. In re Japikse, 86 USPQ 70; In re Einstein, 8 USPQ 167. Further, an arrangement of a light control sheet having lens portion having trapezoidal shapes in cross-sections and arranged at predetermined spaces from each others, and wedge-shaped portions having isosceles triangle shapes in cross-sections which wedge-shaped portions are arranged between the lens portions wherein the leading

edges of the wedge-shaped portions face the viewer side is known to one skilled in the art as can be seen in the optical device provided by Cohen. In particular, Cohen discloses a light control sheet (15) having lens portions portion having trapezoidal shapes in cross-sections and arranged at predetermined spaces from each others, and wedge-shaped portions (15) having isosceles triangle shapes in cross-sections which wedge-shaped portions are arranged between the lens portions and grooves and contained light absorbing materials (18), see column 3, lines 4-23. Cohen teaches that the leading edges of the wedge-shaped portions can be arranged to face an image side or a viewer side. See column 4, lines 44-50 and fig. 3. Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the view angle control sheet in the optical system provided by Masahiro by rearranging the sheet so that the leading edges of the wedge-shaped portions face the viewer side as suggested by Cohen for the purpose of meeting a particular application. It is also noted that the combined product in which the bottom surface of the wedge-shaped portion faces the image side and the leading edge of the wedge-shaped portion faces to a viewer side as provided by Masahiro et al in view of Cohen will inherently have an outside light beam absorption effect due to the same structure of the optical element and the same arrangement of the optical element with respect to the image side and the observed side.

Response to Arguments

9. Applicant's arguments with respect to claims 1-17, now applied to claims 1-8 and 10-17 as provided in the amendment of 8/31/2007, page 17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. The references listed in the form PTO-1449 filed by applicant on 8/31/2007 have been considered; however, the references are lined-through because all references listed in the form PTO-1449 of 8/31/2007 are provided and listed in the form PTO-1449 filed by applicant on 2/9/2006. Duplicate citations of references need to be lined-through to prevent any reference from being printed twice on the face of the patent should this application pass to issue.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

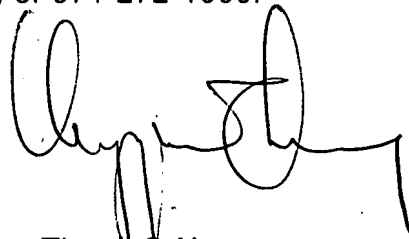
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2872

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (571) 272-2316. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on (571) 272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Thong Q. Nguyen
Primary Examiner
Art Unit 2872



15/15
PRIOR ART
FIG. 15

(SCREEN IMAGE SIDE)

(OBSERVER SIDE)

